Although no loss of human life or of livestock was reported, the damage in destruction of growing crops was extremely heavy being heightened by the fact that the region affected suffered overflow the previous year (1927), and this crop had been put in overflow the previous year (1927), and this crop had been put in and brought to the cultivation stage by the extensive employment of credit and charity agencies; also, the subsidence of the flood mostly came too late in the season for emergency or substitute crops to be successfully grown during the present year.

Figures obtained from the Mississippi River Commission indicate that 387,712 acres, practically all in the lower Yazoo-Mississippi Delta, was flooded this summer, of which area about 94,400 acres was in growing crops at the time of submergence.

Damage to highways and bridges, while not extensive, also occurred, with various expenditures and damages, such as private and municipal levees and bulwarks, incident to flood protection, the exact amount of which can not be ascertained, much of it being intangible, as the moving away of plantation employees,

being intangible, as the moving away of plantation employees, owing to lack of work.

Considering all losses due to the flood in this vicinity in 1928, it is believed that a total of \$1,750,000 would be a conservative

estimate thereof.

Full data on the extent of overflow and the damage done in the reach of the Mississippi within the New Orleans district had not been assembled in time for inclusion in this report. A preliminary statement from New Orleans notes, however, the important similarity of the effect of the flood upon crops in that district to that in other districts to the north. A portion of this statement follows:

The time of occurrence of the rise was unfortunate for crops planted in backwater areas above the mouth of the Red Rive and in smaller areas, where the bluffs between Vicksburg and Baton Rouge are interrupted by more open areas around the mouths of small eastern tributaries of the Mississippi.

Further overflow from the open crevasse in the lower western levee, or Port Barre South Levee, of the Atchafalaya River, occurred in the neighborhood of Henderson and Breaux Bridge, St. Martin Parish. Special forecasts regarding the amount of rise, time of culmination, and subsequent recession of the overflow were supplied to the relief agencies.

Floods in Kansas.—On the Smoky Hill and Solomon Rivers of Kansas damaging overflows occurred between the 11th and 15th in the vicinity of Beloit, Niles, and Ogden, and again, following the rains of the 18th, in the vicinity of Minneapolis, Kans. The damage, principally to matured crops, was estimated at \$141,600 for the first rise and at \$278,000 for the second.

Miscellaneous.—In interior Ohio and Indiana considerable damage to farms resulted from heavy local rains and overflows from small creeks, and in the Weegee Valley of Ohio, where Weegee Creek was in flood on the 12th, two mines were flooded, with resultant temporary suspension of operations, several bridges were washed out, and other damage was done to an extent roughly estimated at \$500,000.

The floods in the Atlantic, East Gulf, West Gulf, and Pacific drainages were in general of no consequence.

[All dates in July except as otherwise specified]

River and station	Flood stage	Above flood stages—dates		Crest	
		From-	То—	Stage	Date
ATLANTIC DRAINAGE Susquehanna: Oneonta, N. Y	Feet 12			Feet 12.5	23.
Santee: Rimini, S. C.	12	2 16	14 20	13. 5 13. 5	5. 18–19.
Ferguson, S. C.	12	28 4 14 31	(2) 8 22 (2)	13. 8 12. 5 13. 0	31. 6. 17.
Broad: Blairs, S. C. Saluda: Pelzer, S. C. Altamaha: Everett City, Ga.	15 7 10	(1) 13 20	13 25	15. 8 7. 4 10. 3	June 30. 13. 22-23.
EAST GULF DRAINAGE				İ	
Tombigbee: Lock No. 4, Demopolis, Ala Etowah: Canton, Ga	39 11	<sup>(1)</sup> 14	2 14	42. 3 13. 1	June 30. 14.

<sup>1</sup> Continued from last month.

2 Continued at end of month.

River and station	Flood stage	Above flood stages—dates		Crest	
		From-	то-	Stage	Date
MISSISSIPPI DRAINAGE	77			77.4	
	Feet 35	1	8	Feet 38. 4	5.
Ohio: Evansville, Ind. Dam No. 48, Cypress, Ind. Shawneetown, Ill.	35	3	8	36.9	6.
Shawneetown, Ill.	35	3	10	37.0	7.
Cairo, Ill	45 9	$\frac{1}{22}$	22	45. 6 9. 7	5–7. 22.
Green:		i			
Lock No. 6, Brownsyille, Ky. Lock No. 4, Woodbury, Ky. Lock No. 2, Runsey, Ky. Barren: Bowling Green, Ky.	30	1	2 4	30. <b>6</b>	1.
Lock No. 2. Rumsey, Ky	33 34	June 30 June 30	10	39. 0 38. 3	2. 6.
Barren: Bowling Green, Ky	20	1	2	22.4	2.
Tippecanoe: Norway, Ind	- 6	2 9	2	6.1	2.
Climberland:	15	9	9	15. 6	9.
Carthage, Tenn Nashville, Tenn Clarksville, Tenn	40	1	4	45. 2	2.
Nashville, Tenn	40	(1)	7	42.9	5.
Clarksville, Tenn Tennessee:	46	(1)	8	48. 0	2.
Rockwood, Tenn	20	1	2	23. 4	1.
Rockwood, Tenn Clinch: Clinton, Tenn	25	(1)	1	28.6	June 30.
Mississippi: New Madrid, Mo	34	(1)	12	36.0	6-7.
Memphis, Tenn Holena, Ark	35	3	14	35. 9	10.
Helena, Ark	44	(1)	17	45.7	12-13.
Greenville Miss	48 42	(i)	22 21	52. 6 45. 5	6–8. 6–11.
Vicksburg, Miss	45	8	28	49.3	11-14.
Natchez, Miss	46	5	28	48. 5	11-14. 18-19. 18-21.
Angola, La	45 35	11 10	27 29	46. 0 36. 4	18-21. 19-21, 23.
Holena, Ark Arkansas City, Ark Greenville, Miss Vicksburg, Miss Natchez, Miss Angola, La Baton Rouge, La Donaldsonville, La Illmois	28	17	25	28. 2	21-23,
Morris, III	13	5	17	14.7 17.3	6. 7-8.
Peru, Ill.	14	{22	25	14.4	23.
Henry, Ill	10	` 8	15	10.8	10-11.
Henry, Ill Havana, Ill Beardstown, Ill	14 14	8 12	18	14.4 14.1	10-11. 12-14. 13-16.
Meramec:	1				
Pacific, Mo	11	(1)	1	14.5	June 30.
St. Francis:	14	(1)	1	18. 2	June 30.
St. Francis, Ark	17	(1) (1)	11	26.7	June 26.
Marked Tree, Ark Smoky Hill: Solomon, Kans	$\frac{17}{24}$	(1)	20 12	18.3	5-10. 11.
Solomon: Beloit, Kans	18	10	10	24. 2 20. 2	10.
	, ,,,	13	15	24. 2	14.
	ĺ	20 31	22	24. 2	21.
Grand, West Fork: Gallatin, Mo	20	22	(²) 25	32. 7	24.
Grand: Chillicothe, Mo.	18	22	26	27. 4	25.
Grand. West Fork: Gallatin, Mo- Grand: Chillicothe, Mo- Grand, Thompsons Fork: Trenton, Mo- Arkansas: Yancopin, Ark	20 29	(1)	23 27	22. 5 39. 1	23. 1-5.
winte:	i				, 1-0. 
Newport, Ark	26	(1)	4	32. 6	June 25.
Georgetown, Ark De Valls Bluff, Ark	22 24	(1)	12 9	29. 9 28. 5	June 27. June 28–29.
Clarendon, Ark	30	(i)	11	34. 9	1.
Black:	,,			15.0	T 10
Corning, Ark Black Rock, Ark	11 14	(1) (1)	13 15	15. 0 26. 6	June 19. June 22.
Cache: Patterson, Ark	9	(1)	9	11.8	June 27-28.
Sulphur: Finley, Tex	24	(1)	3	28.6	June 29.
Cache: Patterson, Ark Sulphur: Finley, Tex Cypress: Jefferson, Tex Atchafalaya: Melville, La.	18 37	(1)	29	19. 3 37. 6	1. · · · · · · · · · · · · · · · · · · ·
WEST CHIEF TO AIMACE	J .		-		
I FIIILY:	25	29	29	25. 1	29.
Dallas, Tex Trinidad, Tex	23 28	29	3	28. 4	3.
PACIFIC DRAINAGE		_			
Colorado: Parker, Ariz	7	(1)	20	11.9	June 8.
		26	27	7.0	26-27.
Columbia: Marcus, Wash	24	(1)	19	34. 2	May 30-31.

<sup>1</sup> Continued from last month.

## MEAN LAKE LEVELS DURING JULY, 1928

By United States Lake Survey [Detroit, Mich., August 4, 1928]

The following data are reported in the Notice to Mariners of the above date:

Data	Lakes <sup>1</sup>					
	Superior	Michi- gan and Huron	Erie	Ontario		
Mean level during July, 1928: Above mean sea level at New York Above or below—	Feet 602. 87	Feet 580. 41	Feet 572.71	Feet 246. 73		
Mean stage of June, 1928	+0.40 +0.23 +0.80	+0. 29 +0. 83 +0. 25	+0.32 +0.54 +0.39	+0.14 +0.72 +0.53		
Highest recorded July stage Lowest recorded July stage	-0.95 +2.01	-3. 17 +1. 87	-1. 70 +1. 59	-1.99 +2.14		
Average departure (since 1860) of the July level from the June level.	+0. 21	+0.06	-0.04	-0.04		

<sup>&</sup>lt;sup>1</sup> Lake St. Clair's level: In July, 1928, 575.54 feet.

<sup>&</sup>lt;sup>2</sup> Continued at end of month.